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AMENDMENTS TO THE CLAIMS:

Claims 1-4 (Cancelled)

5. (Currently amended) A gas turbine unit comprising a first compressor to compress and discharge gas, a combustor to which the gas compressed by the first compressor is fed to, and a turbine to be driven by the combustion gas of from the combustor;

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wherein said gas turbine unit has a turbine-cooling system to feed the gas from said first compressor to the turbine, said turbine-cooling system comprising: a heat exchanger to cool the gas compressed by said first compressor, a liquid-separating means for separating liquid from the gas cooled by the said heat exchanger, and a second compressor to raise the pressure of the gas having passed through the said liquid-separating means to a desired level.

6. (Currently amended) A gas turbine unit comprising a first compressor to compress and discharge gas, a combustor to which the gas compressed by the first compressor is fed to, and a turbine to be driven by the combustion gas of from the combustor;

wherein said gas turbine unit has a turbine-cooling system to feed the gas from said first compressor to the turbine, said turbine-cooling system comprising: a heat exchanger to cool the gas compressed by said first compressor, a dust-collecting means for separating dust, etc. dust from the gas cooled by the said heat exchanger, and a second compressor to raise the pressure of the gas having passed through the said dust-collecting means to a desired level.

7. (Currently amended) A gas turbine unit comprising a first compressor to compress and discharge gas, a combustor to which the gas compressed by the first compressor is fed to, and a turbine to be driven by the combustion gas of from the combustor;

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wherein said gas turbine unit has a turbine-cooling system to feed the gas from said first compressor to the turbine, said turbine-cooling system comprising: a heat exchanger to cool the gas compressed by said first compressor, a liquid-separating means for separating liquid from the gas cooled by the heat exchanger, a dust-collecting means for separating dust, etc. dust from the gas having passed through the liquid-separating means, and a second compressor to raise the pressure of the gas having passed through the dust-collecting means to a desired level.

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8. (Currently Amended) A gas turbine unit as claimed in claim 5, wherein said turbine-cooling system comprises comprising a first compressor to compress and discharge gas, a combustor to which gas compressed by the first compressor is fed, and a turbine to be driven by combustion gas from the combustor,

wherein said gas turbine unit has a turbine-cooling system to feed gas from said first compressor to the turbine, said turbine-cooling system comprising: a heat exchanger to cool the gas compressed by said first compressor, a liquid-separating means for separating liquid from the gas cooled by said heat exchanger, a second compressor to raise the pressure of the gas having passed through said liquid-separating means to a desired level, and a dust-collecting means for separating dust, etc. dust from gas disposed below said second compressor.

9. (Currently amended) A gas turbine unit comprising a first compressor to compress and discharge gas, a combustor to which the gas compressed by the first compressor is fed to, and a turbine to be driven by the combustion gas of from the combustor;

wherein said gas turbine unit has a turbine-cooling system to feed the gas from said first compressor to the turbine, said turbine-cooling system comprising: a heat exchanger to cool the gas compressed by said first compressor, a liquid-separating means for separating liquid from the gas

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cooled by the heat exchanger, a first dust-collecting means for separating dust, etc. dust from the gas having passed through the liquid-separating means, a second compressor for raising the pressure of the gas having passed through the first dust-collecting means to a desired level, and a second dust-collecting means for separating dust, etc. dust from the gas whose pressure has been raised by the second compressor.

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10. (Currently Amended) A gas turbine unit comprising a first compressor to compress and discharge gas, a combustor to which the gas compressed by the first compressor is fed to, and a turbine to be driven by the combustion gas of from the combustor;

wherein said gas turbine unit has a turbine-cooling system to feed the gas from said first compressor to the turbine to cool the turbine and to feed the gas from the turbine to the combustor, said turbine-cooling system comprising an indirect cooling heat exchanger to cool the gas compressed by said first compressor, a mist separator for separating liquid from the gas cooled by the heat exchanger, a cyclone for separating dust, etc. dust from the gas having passed through the mist separator, a second compressor to raise the pressure of the gas having passed through the cyclone to a desired level and a filter for separating dust, etc. dust from the gas whose pressure has been raised by the second compressor.

Claims 11 and 12 (Cancelled)

13. (Withdrawn) A gas turbine unit as claimed in claim 5, wherein a means to measure the temperature of the gas cooled by the heat exchanger is provided.

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14. (Withdrawn) A gas turbine unit as claimed in claim 5, wherein a means to measure the temperature of the gas cooled by said heat exchanger and a means for controlling the supply of refrigerant to said heat exchanger in accordance with the temperature measured are provided.

15. (Withdrawn) A gas turbine unit comprising a first compressor to compress and discharge gas, a combustor which the gas compressed by the first compressor is fed to, and a turbine to be driven by the combustion gas of the combustor;

wherein said gas turbine unit has a turbine-cooling system to feed the gas from said first compressor to the turbine, said turbine-cooling system comprising a heat exchanger to cool the gas compressed by said first compressor, a means to measure the temperature of the gas cooled by the heat exchanger, a means for controlling the supply of refrigerant to said heat exchanger in accordance with the temperature measured, a liquid-separating means for separating liquid from the gas cooled by the heat exchanger, a first dust-collecting means for separating dust, etc. from the gas having passed through the liquid-separating means, a second compressor to raise the pressure of the gas having passed through the dust-collecting means to a desired level, and a second dust-collecting means for separating dust, etc. from the gas whose pressure has been raised by the second compressor, said second dust-collecting means being at least two filters disposed in parallel in the cooling system of the turbine.

16. (Withdrawn) A gas turbine unit comprising a first compressor to compress and discharge gas, a combustor which the gas compressed by the first compressor is fed to, and a turbine to be driven by the combustion gas of the combustor;

wherein said gas turbine unit has a turbine-cooling system to feed the gas from said first compressor to the turbine, said turbine-cooling system comprising a heat exchanger to cool the gas

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compressed by said first compressor, a dust-collecting means for separating dust, etc. from the gas cooled by the heat exchanger, and a second compressor to raise the pressure of the gas having passed through the dust-collecting means to a desired level, said dust-collecting means being at least two filters disposed in parallel in the cooling system of the turbine.

17. (Withdrawn) A gas turbine unit comprising a first compressor to compress and discharge gas, a combustor which the gas compressed by the first compressor is fed to, and a turbine to be driven by the combustion gas of the combustor;

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wherein said gas turbine unit has a turbine-cooling system to feed the gas from said first compressor to the turbine, said turbine-cooling system comprising a heat exchanger to cool the gas compressed by said first compressor, a dust-collecting means for separating dust, etc. from the gas cooled by the heat exchanger, and a second compressor to raise the pressure of the gas having passed through the dust-collecting means to a desired level, said dust-collecting means being at least two filters disposed in parallel in the cooling system of the turbine, a pressure detector being provided to detect the difference between the pressures before and after the filter, and passage opening-and-closing means being disposed above and below the cooling system of the filter to each control the flow of the air into the filter.

18. (Withdrawn) A gas turbine unit comprising a first compressor to compress and discharge gas, a combustor which the gas compressed by the first compressor is fed to, and a turbine to be driven by the combustion gas of the combustor;

wherein said gas turbine unit has a turbine-cooling system to feed the gas from said first compressor to the turbine, said turbine-cooling system comprising a heat exchanger to cool the gas compressed by said first compressor, a liquid-separating means for separating liquid from the gas

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cooled by the heat exchanger, a first dust-collecting means for separating dust, etc. from the gas having passed through the liquid-separating means, a second compressor to raise the pressure of the gas having passed through the first dust-collecting means to a desired level, and a second dust-collecting means for separating dust, etc. from the gas whose pressure has been raised by the second compressor, said first dust-collecting means being at least two filters disposed in parallel in the cooling system of the turbine.

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19. (Cancelled)

20. (Currently Amended) A gas turbine unit comprising a first compressor to compress and discharge gas, a combustor to which the gas compressed by the first compressor is fed to, and a turbine to be driven by the combustion gas of from the combustor;

wherein said gas turbine unit has a turbine-cooling system to feed the gas from said first compressor to the turbine, said turbine-cooling system comprising a heat exchanger to cool the gas compressed by said first compressor, a separating means for separating liquid and dust, etc. dust from the gas cooled by the heat exchanger, a second compressor to raise the pressure of the gas having passed through said separating means to a desired level, and a dust-collecting means for separating dust, etc. dust from the gas whose pressure has been raised by the second compressor.

21. (Withdrawn) A gas turbine unit comprising a first compressor to compress and discharge gas, a combustor which the gas compressed by the first compressor is fed to, and a turbine to be driven by the combustion gas of the combustor;

wherein said gas turbine unit has a turbine-cooling system to feed the gas from said first compressor to the turbine, said turbine-cooling system comprising a heat exchanger to cool the gas

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compressed by said first compressor, a dust-collecting means for separating dust, etc. from the gas cooled by the heat exchanger, a second compressor to raise the pressure of the gas having passed through said dust-collecting means to a desired level, and a separating means for separating liquid and dust, etc. from the gas whose pressure has been raised by the second compressor.

22. (Withdrawn). A gas turbine unit comprising a first compressor to compress and discharge gas, a combustor which the gas compressed by the first compressor is fed to, and a turbine to be driven by the combustion gas of the combustor;

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wherein said gas turbine unit has a turbine-cooling system to feed the gas from said first compressor to the turbine, said turbine-cooling system comprising a heat exchanger to cool the gas compressed by said first compressor, a dust-collecting means for separating dust, etc. from the gas cooled by the heat exchanger, a separating means for separating liquid and dust, etc. from the gas having passed through said dust-collecting means, and a second compressor to raise the pressure of the gas having passed through the separating means to a desired level.

Claims 23-25 (Cancelled)

26. (Currently Amended) A gas-turbine cooling method for a gas turbine unit comprising a compressor to compress and discharge gas, a combustor to which the gas compressed by the compressor is fed to, and a turbine to be driven by the combustion gas of from the combustor;

wherein the gas compressed by said compressor is cooled, liquid is separated from the gas cooled, dust, etc. are dust is separated from the separated gas, the pressure of the separated gas is raised to a desired level, and after dust, etc. are dust is separated from the gas whose pressure has been raised, the gas is fed to the turbine so that the turbine may be cooled.

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27. (Cancelled)

28. (Withdrawn) A gas-turbine cooling method for a gas turbine unit comprising a compressor to compress and discharge gas, a combustor which the gas compressed by the compressor is fed to, and a turbine to be driven by the combustion gas of the combustor;

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said cooling method includes a first step to cool the gas compressed by said compressor, a second step to separate dust from the gas cooled, a third step to raise the pressure of the separated gas to a desired level, a fourth step to cool the turbine by feeding the gas whose pressure has been raised to the turbine, and a step, either between said second and third steps or between third and fourth steps, to separate liquid and dust from the gas.

29. (New) A gas turbine unit comprising a first compressor to compress and discharge gas, a combustor to which gas compressed by the first compressor is fed, and a turbine to be driven by combustion gas from the combustor; wherein:

said gas turbine unit has a turbine-cooling system to feed the gas from said first compressor to the turbine,

said turbine-cooling system comprises: a heat exchanger to cool gas compressed by said first compressor, a liquid-separating means for separating liquid from the gas cooled by said heat exchanger, and a second compressor to raise the pressure of the gas having passed through said liquid-separating means to a desired level, and

said liquid-separator means is disposed below said heat exchanger and above said second compressor in said turbine-cooling system.

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30. (New) A gas turbine unit comprising a first compressor to compress and discharge gas, a combustor to which the gas compressed by the first compressor is fed, and a turbine to be driven by combustion gas from the combustor; wherein:

 said gas turbine unit has a turbine-cooling system to feed the gas from said first compressor to the turbine,

 said turbine-cooling system comprises: a heat exchanger to cool gas compressed by said first compressor, a liquid-separating means for separating liquid from the gas cooled by said heat exchanger, and a second compressor to raise the pressure of the gas having passed through said liquid-separating means to a desired level, and

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 said heat exchanger, said liquid-separating means and said second compressor are arranged from upstream to downstream in said turbine-cooling system.

31. (New) A gas turbine unit comprising a first compressor to compress and discharge gas, a combustor to which the gas compressed by the first compressor is fed, and a turbine to be driven by combustion gas from the combustor; wherein:

 said gas turbine unit has a turbine-cooling system to feed gas from said first compressor to the turbine,

 said turbine-cooling system comprises: a heat exchanger to cool gas compressed by said first compressor, a dust-collecting means for separating dust from the gas cooled by said heat exchanger, and a second compressor to raise the pressure of the gas having passed through said dust-collecting means to a desired level, and

 said dust-collecting means is disposed below said heat exchanger and above said second compressor in said turbine-cooling system.

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32. (New) A gas turbine unit comprising a first compressor to compress and discharge gas, a combustor to which the gas compressed by the first compressor is fed, and a turbine to be driven by combustion gas from the combustor; wherein:

 said gas turbine unit has a turbine-cooling system to feed gas from said first compressor to the turbine,

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 said turbine-cooling system comprises: a heat exchanger to cool gas compressed by said first compressor, a dust-collecting means for separating dust from the gas cooled by said heat exchanger, and a second compressor to raise the pressure of the gas having passed through said dust-collecting means to a desired level, and

 said heat exchanger, said dust-collecting means and said second compressor are arranged from upstream to downstream in said turbine-cooling system.